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# ANNUAL REPORTS

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# STATE BOARD OF HEALTH,

OF COLORADO.



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**Division of**  
DENVER, COLO.  
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## THE INCOMPATIBILITY OF HIGHER EDUCATION WITH THE DUTIES OF MOTHERHOOD.

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The subject that I have the honor to present to you has not, I believe, been touched upon by the advocates of higher education, nor, so far as I can ascertain, has it been taken into account by the opponents of that idea; though, as it seems to me, it is the most powerful argument that nature offers against the enforced application of the female mind to intellectual pursuits, and nature's strongest plea that the mothers of a race should be shielded from all those absorbing anxieties that require an expenditure of materials that were designed for other purposes.

The *first* point, to which I shall ask your attention, is the similarity in some respects of nerve tissue, brain substance (especially the grey matter), the yolk of egg and milk. All these substances contain a notable amount of phosphorus in various combinations. Milk, our food and drink during the earliest months of life, supplying all the elements of growth of nerve, brain and bone, contains about one per cent. of earthy phosphates in its solid ingredients. In the eggs of the common fowl and our other domestic birds we have nearly twenty-five per cent. of a phosphoric compound in the form of lecithine; and it is reasonable to suppose that in the ovum of so highly an organized creature as the human female, the proportion is still larger and the combination finer. It is evident then that these substances play an important part in the beginning of life, in the very conceptive process itself and the substructure built immediately upon it; and hence it is clear that sexual health must be that condition in which the ova are filled regularly and ripened fully by an abundant supply of lecithine; where there is a free flow of blood to the parts,

favoring the ready softening of the follicle; and the easy discharge of the ova into the uterus. I believe that the theory is pretty generally accepted that the operations of the mind are carried on at the expense of the phosphoric compounds of the brain, and it is unnecessary to more than mention the fact that we suffer great prostration after prolonged and enforced mental effort, and in that condition which we speak of as nervous prostration, or debility, the phosphates in the urine are very abundant.

The *second* point is the influence of the emotions upon the mammary secretion. This has come under the observation of every one. Anger will make the cow "hold up her milk;" the colt of the frightened mare will die of colic, and every grandmother will tell us of scores of cases in which anger, grief or terror, on the part of the mother, has caused the severe illness or death of the child. These emotions are simply mental processes. They cause sudden and violent waste of nervous material, an unusual expenditure of phosphoric compounds, and either poison the milk by pouring into it improperly prepared material, or taking from it some very essential element, leaving, instead of wholesome nourishment, a virulent poison. Now, manifestations of influence differ only in degree, and we may conclude from these facts that all mental processes affect the mammary secretion; and, if mental effort impairs or vitiates the secreting power of the glands, or takes from the blood those elements that are designed for the formation of milk, is it not reasonable to suppose that a similar expenditure of nerve force by an immature woman would, in like manner, rob the system of the material intended for the development of her power to supply, in the future, the wants of her offspring. Close mental application, then, would, if our theory is correct, greatly affect the growth of this gland, and to be assured that it does so, we have only to look through our boarding schools and compare the glandless bust of the girl or young woman who spends half her nights over her mathematics or essays, with the plump rosy girl, with breasts like Venus, who goes to bed at dark, and would sleep over the most exciting novel Dumas ever wrote. Or my Venus may slip away from her tutors and dance all night with other intellectual giddy pates, yet she uses up none of her woman's force in solving any problems heavier than catching a beau and having a good time, and under this pleasing stimulant her breasts become beautifully rounded, her form full, and nature speedily perfects in her the capacity for becoming that for which she was created—a mother.

In the fourth place we come to consider the condition of the mammary gland as an index to that of the uterus and ovaries, and we have only to follow the girls above mentioned to their homes.

Pallas reaches her home, and several months are required to recover her lost health. The doctor says it is nervous debility. Her menses are of course irregular, or if it appears at the proper time, her ovaries have been starved to such a degree that the season is one of great agony and is looked forward to with dread. Often she feels that she must keep up her studies, perhaps with the idea of being a suitable companion for some man of mental ability who has chosen her for a wife.

She marries, and we soon make her acquaintance as a young married woman suffering "everything" from derangement of her womanly functions. After several months she becomes pregnant, and perhaps carries her child to time, is delivered after a long labor, frequently with instruments, and finding no milk in her imitation breasts, nurses a puling infant with a bottle. Here we leave her.

Venus goes with a hop and step from school over the home threshold (lingering just long enough to learn from mother that she is a woman) into the arms of her husband. In a warm, fertile soil, seed springs up speedily, and, to a day, baby makes his appearance, often before the doctor. As soon as we allow it, she is up, and we hear no more from her for a year and a half, unless her baby gets "out of sorts." These are not fancy pictures, gentlemen, I am sure many a Pallas and a rare Venus comes up before you at this moment.

The first case that came under my notice was a young married woman of scholarly habits and a fine education, the one daughter of four that insisted on having that accomplishment; and the only one of the four, I may say, that ever had profuse menstruation, difficult labor, or that lacked milk. She was married at twenty-one, had borne one child, which she had nursed till it was fourteen months' old; but her breasts were small and the baby had always seemed hungry, and was not plump like other babies. She wished advice as to the means of increasing and keeping a supply of milk. I advised rice, milk, tea, etc., and that she live as care-free as possible. Several days after she told me that she had almost no milk, and upon close inquiry I learned that she was devoting two hours a day to the study of the language spoken at the station, and that she suffered severe headache after each lesson and was always obliged to lie down and rest an hour or two. I advised that she leave off study at once, and still continue her efforts to regain her milk, as the climate made it

extremely improbable that the child would live long on artificial food. She followed my advice and in a few days had sufficient nourishment for her babe. Several times she took up study and as often was obliged to leave it. At last she persuaded herself that it was not study that interfered with the milk, and, resuming her mental labor, persevered in it till the milk was all gone.

My second case was that of another holder of medals and seminary prizes, of faultless physique, high, noble forehead, but small breasts. Her child was born in the mountains, seventy miles from the station, and, being lonely, she passed much of her time, after confinement, in the study of the language. She was in good health and spirits and very anxious to become a proficient in the language. She began to walk about on the twelfth day, and at that time had a very fair supply of milk. At the end of the second week she began to study one hour each day, I agreeing to the compromise, thinking that that would hardly be injurious. In three days she had to begin to feed the baby goat's milk, and at the end of the month, as she would not listen to the advice to give up her study, she returned to her home with breasts as flat as a table.

My third case was that of a young woman who had not suffered college life to mar her symmetry. She had not given any particular attention at school to language, or mathematics, or philosophy, but excelled as an essayist and critic. After her marriage she determined to devote herself to book-making. She, however, became pregnant in a short time and set about making herself a good animal, as I convinced her that she could do much more toward having a "smart boy" by having a good body, and being a good milker, than she would by "cultivating her mind." Her boy was born after two hours travail, was, and is, everything that a mother could desire. When the child was eight months old she wished to begin her literary work and I told her my theory in regard to mind and milk giving, and asked her to feed carefully, and try writing evenings after baby had gone to bed. After four or five days she returned, saying, that her milk failed the second day, baby had colic, and she gave up work on the third day. She kindly tried this experience half a dozen times during lactation with the same result. Finally, in the fourteenth month, she began work again, and in a week, her milk which was very abundant at the beginning, was gone entirely.

Since then I have studied similar cases carefully and have noticed that just in proportion to the time spent in college, or in teaching, and the diligence of the application to mental pursuits, just in that

ratio are the cases of amenorrhœa, menorrhagio, before marriage. Those women have no breasts, do not conceive until from four to twelve months after marriage, have slow and difficult labors, followed more frequently by complications, and their milk, never abundant, disappears in a few months at best, and invariably when they begin to make any mental effort.

These cases were in marked contrast with that of Mrs. ———, who had danced through the Mount Holyoke Seminary, leaving that woman-killing institution at the end of two years, fortunately without having acquired an idea beyond long division. Her baby, a healthy male, arrived, to the day, at the end of nine months. Her labor was as easy as ever falls to the lot of woman, and neither that, nor any subsequent labor, and I attended her in three, lasted more than an hour. Her breasts were like china bowls and never lacked milk, and her children are as sprightly and as intelligent as a father could desire. Since then I have multiplied cases proving that mental labor cannot be performed by a nursing woman without endangering her supply of milk, and I am convinced that study and everything else that tends to draw away nervous supply from its peculiar specialty in woman is to be strongly condemned.

The fifth point is in reply to the objection that may be made to this theory, which is, that these flat breasts and torpid uteri and ovaries are but the result of close confinement, want of exercise, etc., but you will please remember that a great number of these women do not seem to be in ill health outside of the diseased female organs, and that this physical deformity of so many thousands of our American women cannot be reasonably attributed solely to a lack of physical exercise, a glance at the domestic life of man from the earliest historic times to the present will abundantly prove; for, in all ages and countries of the world, the life of women of the most cultivated and wealthy classes has ever been severely sedentary. Kings' daughters wrought needle work in the days of Solomon. Andromache and her maids were engaged with their looms and tapestry from morning till night; and from Helen to Queen Elizabeth and Martha Washington "woman's sphere" has always and everywhere been in the house. But, if we judge from the paintings and sculpture of those times, they do not lack in those exquisitely beautiful proportions which so charm us, and queens and princesses were happy in giving suck to their babes.

The instances in which women are represented, on the battle field, in the cabinet, in the chase, or at the plow, are rarely exceptional, and

those who were distinguished in war, literature or state-craft, left no children, at least none who were in like manner famous. The same illustrations answer to disprove the theory that mothers must be highly educated in order to produce intellectually good offspring. From all we can learn of the life of the women to whom I have alluded, and judging from what we know of the present social condition of women in those countries now, we have no reasons to suppose that they ever made an effort that could be called mental, and who will lightly estimate the mighty influence of their children? The Turkish, Arab and Brahmin women, living, as we have every reason to suppose, as their mothers did thousands of years ago, who never go outside the walls of the harem, are the mothers of men, who, if they had American or English training, would have no superiors in power of intellect on the face of the earth.

In this paper I have not sought to bring reproach upon mental culture. Physically, we can all put forth a certain amount of effort, not only without injury, but with benefit, and the same is true of the powers of the mind. What it seems to me that, as guardians of the public health, we ought strongly to protest against, is the pernicious forcing of a girl's mind into channels not designed for her by nature, and exhausting, by continuous labor, those forces that God intended to develop her organs of generation and to supply food for her offspring.